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FOREST PRODUCTS LABORATORY
LIST OF PUBLICATIONS
ON
MECHANICAL PROPERTIES AND
STRUCTURAL USES OF WOOD
AND WOOD PRODUCTS

JUNE 1965

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U. S. Department of Agriculture
Forest Service

Madison, Wisconsin 53705

In cooperation with the University of Wisconsin

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U. S. DEPARTMENT OF AGRICULTURE
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FOREWORD¹

Scope. --This is a partial listing of literature available on mechanical properties and structural uses of wood and wood products. It includes publications that give general information and the results of research by the U.S. Forest Service and other organizations.

Sources of publications

(1) U.S. Forest Products Laboratory

Publications without an asterisk (*) are available for distribution from this Laboratory. Single copies may be obtained free upon request to the Director, Forest Products Laboratory, Madison, Wis. 53705.

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¹--This list was previously issued as Forest Products Laboratory Report No. 200.

Symbols and abbreviations used. --For the sake of brevity in the column "Publication and Date," the following abbreviations have been used.

- USDA - U.S. Department of Agriculture.
- USFS - U.S. Forest Service.
- FPL - Forest Products Laboratory
- ASTM - American Society for Testing and Materials (1916 Race St., Philadelphia, Pa. 19103).
- NACA - Now NASA, NASA Scientific & Technical Information Facility (P.O. Box 5700, Bethesda, Md.).
- GPO - Government Printing Office.
- CFSTI - Clearinghouse for Federal Scientific and Technical Information, U.S. Department of Commerce, Springfield, Va. 22151.
- Rev. - Revised.
- R&R - Reviewed and reaffirmed.

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FACTORS AFFECTING STRENGTH

Growth Conditions

Relationship of locality in rate of growth to density and strength of Douglas-fir.	: Drow, J. T.	: FPL Rpt. 2078. 1957.
	:	: R&R 1965.
	:	:
	:	:
How growth affects quality in hardwood lumber.	: Paul, B. H.	: South. Lbrmn., Dec. 1, 1961.
	:	:
	:	:
How growth affects quality in hickory and ash.	: Paul, B. H.	: Woodworking Indus., Feb. 1926. Hardwood Record, Jan. 10, 1925.
	:	:
	:	:

Growth Features

Preliminary study of the factors affecting tensile strength of structural lumber.	: Zehrt, W. H.	: FPL Rpt. 2251. 1962.
	:	:
	:	:
	:	:
Differences between heartwood and sapwood.	: Forest Products Laboratory	: FPL Tech. Note 189. Reissued 1962.
	:	:
"Virgin growth" and "second growth."	: Forest Products Laboratory	: FPL Tech. Note 153. 1957.
	:	:
*Structure, occurrence, and properties of compression wood.	: Pillow, M. Y., & Luxford, R. F.	: USDA Tech. Bul. 546. 1937. Out of print.
	:	:
	:	:
Compression wood cause of bowing and twisting.	: Pillow, M. Y.	: South. Lbrmn., Mar. 1, 1931; Wood Construct., Nov. 1, 1930; Wood Working Indus., Nov. 1930.
	:	:
	:	:
	:	:
	:	:
*Effect of spiral grain on strength of wood.	: Wilson, T. R. C.	: Jour. For., Nov. 1921. Out of print.
	:	:

	:	:
Title	:	Author
	:	Publication and date
	-----	-----

FACTORS AFFECTING STRENGTH (continued)

Loading Conditions

Creep of small wood beams under constant bending load.	: Clouser, W. S.	: FPL Rpt. 2150. 1959.
	:	: R&R 1965.
	:	:
Effect of rapid loading and duration of stress on the strength properties of wood tested in compression and flexure.	: Brokaw, M. P., & : Foster, G. W.	: FPL Rpt. 1518. 1945. : R&R 1965.
	:	:
	:	:
	:	:
Effect of prestressing on mechanical properties of Douglas-fir and southern yellow pine.	: Wood, L. W.	: FPL Rpt. 2073. 1957.
	:	: R&R 1965.
	:	:
	:	:
Time-related flexural behavior of small Douglas-fir beams under prolonged loading.	: Youngs, R. L., & : Hilbrand, H. C.	: Forest Prod. Jour. : June 1963.
	:	:
	:	:
Fatigue resistance of quarter- scale bridge stringers in flexure and shear.	: Lewis, W. C.	: FPL Rpt. 2236. 1962.
	:	:
	:	:
	:	:
Effect of a single reversal of stress on the static and impact bending strength of Sitka spruce and Douglas-fir.	: Kommers, W. J.	: FPL Rpt. 1325. 1943.
	:	: R&R 1962.
	:	:
	:	:
Relation of strength of wood to duration of load	: Wood, L. W.	: FPL Rpt. 1916. 1951.
	:	: Reprinted 1962.
	:	:
	:	:
The fatigue behavior of wood and plywood subjected to repeated and reversed bend- ing stresses.	: Kommers, W. J.	: FPL Rpt. 1327. 1943.
	:	: R&R 1960.
	:	:
	:	:

Title	Author	Publication and date
-------	--------	----------------------

FACTORS AFFECTING STRENGTH (continued)

Loading Conditions (continued)

The fatigue behavior of wood and plywood subjected to repeated and reversed bending stresses.	:	:
Supplement: The fatigue behavior of Douglas-fir and Sitka spruce subjected to reversed stresses superimposed on steady stresses.	: Kommers, W. J.	: FPL Rpt. 1327-A. 1944. : R&R 1960.
Effect of ten repetitions of stress on the bending and compressive strengths of Sitka spruce and Douglas-fir.	: Kommers, W. J.	: FPL Rpt. 1320. 1943. : R&R 1960.
Effect of rapid loading on the compressive and flexural strength of wood.	: Liska, J. A.	: FPL Rpt. 1767. 1950. : R&R 1960.
Effect of 5,000 cycles of repeated bending stresses on 5-ply Sitka spruce plywood.	: Kommers, W. J.	: FPL Rpt. 1305. 1943. : R&R 1960.
Design considerations for fatigue in timber structures.	: Lewis, W. C.	: Amer. Soc. of Civil : Engin. Paper No. 3248. : 1959.
The influence of rate of loading on the strength of wood and wood-base material.	: Markwardt, L. J., : & Liska, J. A.	: ASTM Symposium on : Speed of Testing. 1956.
Fatigue of wood and glued joints used in laminated construction.	: Lewis, W. C.	: Forest Prod. Res. : Soc. Proc. 1951.
*Speed of testing of wood: Factors in its control and its effect on strength.	: Markwardt, L. J., : & Liska, J. A.	: ASTM Proc. 1948.

Title	Author	Publication and date
-------	--------	----------------------

FACTORS AFFECTING STRENGTH (continued)

Moisture

Strength-moisture relations for wood.	: Wilson, T. R. C.	: USDA Tech. Bul. 282.
	:	: 1932.

Preservative Treatment

Effect of pressure treatment with coal-tar creosote on the strength of Douglas-fir structural timbers.	: Luxford, R. F., & MacLean, J. D.	: FPL Rpt. 1798. 1951.
	:	:
	:	:

Seasoning

Effect of partial seasoning on the strength of wood.	: Wilson, T. R. C., & Carlson, T. A., & Luxford, R. F.	: FPL Rpt. 1024. 1930
	:	: R&R 1960. Amer.
	:	: Wood-Pres. Assoc. Proc. 1930.
	:	:
Mechanical properties of red oak related to drying.	: Youngs, R. L.	: Forest Prod. Jour., Oct. 1957.
	:	:

Specific Gravity

Southern pine and the density rule.	: Wood, L. W.	: South. Lbrmn., Dec. 1950.
	:	:
*The relation of the shrinkage and strength properties of wood to its specific gravity.	: Newlin, J. A., & Wilson, T. R. C.	: USDA Bul. 676. 1919.
	:	:

Stain and Decay

The significance of the discolorations in yellow-poplar veneers.	: Hepting, G. H., Roth, E. R., & Luxford, R. F.	: FPL Rpt. 1375. 1952.
	:	: R&R 1965.

	:	:
Title	:	Author
	:	Publication and date

FACTORS AFFECTING STRENGTH (continued)

Stain and Decay (continued)

The significance of the discolorations in aircraft veneers:	:	:
American beech.	: Hansbrough, J. R.,	: Forest Path. Spec.
	: Waterman, A. M.,	: Rel. 16. 1944.
	: & Krause, R. L.	:
	:	:
Mahogany and khaya.	: Hansbrough, J. R.,	: FPL Rpt. 1379. 1943.
	: & Krause, R. L.	: R&R 1962.
	:	:
Yellow birch.	: Hansbrough, J. R.,	: FPL Rpt. 1377. 1943.
	: Waterman, A. M.,	: R&R 1962.
	: & Luxford, R. F.	:
	:	:
Chemical stain in noble fir as related to strength.	: Luxford, R. F., &	: FPL Rpt. 1329. 1943.
	: Krone, R. H.	: R&R 1962.
	:	:
"Black streak" in western hemlock:	: Luxford, R. F.,	: FPL Rpt. 1500. 1943.
Its characteristics and influence on strength.	: Wood, L. W., &	: R&R 1960.
	: Gerry, E.	:
	:	:
	:	:
Decay and toughness losses in southern pine infected by <u>Peniophora</u> .	: Lindgren, R. M., &	: Forest Prod. Jour.,
	: Erickson, E. C. O.	: June 1957.
	:	:
	:	:
The significance of black line stain in yellow birch propeller lumber.	: Hansbrough, J. R.	: Forest Path. Spec.
	:	: Rel. 23. 1945.
	:	:
	:	:
The significance of the discolorations in aircraft lumber: Noble fir and western hemlock.	: Englerth, G. H., &	: Forest Path. Spec.
	: Hansbrough, J. R.	: Rel. 24. 1945.
	:	:
	:	:

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

FACTORS AFFECTING STRENGTH (continued)

Stain and Decay (continued)

Sitka spruce.	:	Hansbrough, J. R.,	:	Forest Path. Spec.
	:	& Englerth, G. H.	:	Rel. 21. 1944.
	:		:	
The effect of certain heart rot	:	Scheffer, T. C.,	:	USDA Tech. Bul. 779.
fungi on the specific gravity	:	Wilson, T. R. C.,	:	1941.
and strength of Sitka spruce	:	Luxford, R. F., &	:	
and Douglas-fir.	:	Hartley, C.	:	
	:		:	
*Effect of blue stain on specific	:	Chapman, A. D., &	:	Jour. Agr. Res.,
gravity and strength of	:	Scheffer, T. C.	:	July 15, 1940.
southern pine.	:		:	

Miscellaneous

Effect of hydraulic-equipment	:	Drow, J. T.	:	FPL Rpt. 1520. 1945.
oils on the bending and com-	:		:	R&R 1962.
pressive strength of Sitka	:		:	
spruce.	:		:	
	:		:	
Effect of temperature and	:	James, W. L.	:	Forest Prod. Jour.,
moisture content on internal	:		:	Sept. 1961.
friction and speed of sound	:		:	
in Douglas-fir.	:		:	
	:		:	
Comparative value of timber	:	Forest Products	:	FPL Tech. Note 101.
cut from live and dead trees.	:	Laboratory	:	1958.
	:		:	
Wood at low temperatures.	:	Boller, K. H.	:	Modern Packaging,
	:		:	Sept. 1954.

FIBERBOARDS AND PARTICLE BOARDS

Board materials from wood	:	Lewis, W. C.	:	USFS Res. Note
residues.	:		:	FPL-045. 1964.
	:		:	

Title	Author	Publication and date
-------	--------	----------------------

FIBERBOARDS AND PARTICLE BOARDS (continued)

Effect of size and shape of specimen on the tensile strength of fiberboards.	: Lewis, W. C.	: FPL Rpt. 1716. 1948.
	:	: R&R 1960.
	:	:
FPL show-through comparator for furniture panels.	: Forest Products Laboratory	: FPL Tech. Note 263. 1960.
	:	:
How wax and particle shape affect stability and strength of oak particle boards.	: Heebink, B. G., & Hann, R. A.	: Forest Prod. Jour. July 1959.
	:	:
Use development for particle board.	: Lewis, W. C.	: Forest Prod. Jour. Feb. 1958.
	:	:
Machining tests for particle board; some factors involved.	: Davis, E. M.	: FPL Rpt. 2072. 1957.
	:	:
Testing and evaluating procedures for building boards.	: Lewis, W. C.	: Forest Prod. Jour. July 1956.
	:	:
Effects of speed of test on bending strength of insulation fiberboard.	: Lewis, W. C.	: Tappi. Feb. 1955.
	:	:
Building fiberboards.	: Forest Products Laboratory	: Separate from Wood Handbook. USDA Agr. Handb. 72. 1955.
	:	:
*Tentative specification for fiberboard nail-base sheathing.	: ASTM	: ASTM Std. D 2277.
	:	:
	:	:
*Tentative specification for structural insulating form-board made from vegetable fibers.	: ASTM	: ASTM Std. C 532.
	:	:
	:	:
	:	:

Title	Author	Publication and date
<u>FIBERBOARDS AND PARTICLE BOARDS (continued)</u>		
*Specification for structural insulating board made from vegetable fibers.	: ASTM	: ASTM Std. C 208.
	:	:
	:	:
	:	:
*Terms relating to wood-base fiber and particle panel materials.	: ASTM	: ASTM Std. D 1554.
	:	:
	:	:
	:	:
*Structural insulating board (wood or cane fiber).	: U.S. Dept. Com.	: Simplified Practice
	:	: Recommendation R179
	:	: GPO, 10 cents.
	:	:
*Structural fiber insulating board.	: U.S. Dept. Com.	: Commercial Std. CS 42
	:	: GPO, 15 cents.
	:	:
*Hardboard.	: U.S. Dept. Com.	: Commercial Std. CS 251
	:	: GPO, 10 cents.

GLUED STRUCTURAL MEMBERS

Wood beams prestressed with bonded tension elements.	: Peterson, John	: Proc. of Amer. Soc. of Civil Engin. Vol. 91, No. ST1, 1965.
	:	:
	:	:
	:	:
Effects of certain defects and stress-concentrating factors on the strength of tension flanges of box beams.	: Lewis, W. C., : Heebink, T. B., : & Cottingham, W.S.	: FPL Rpt. 1513. 1944. : R&R 1965.
	:	:
	:	:
Prestressed laminated wood beams.	: Bohannon, Billy	: USFS Res. Paper FPL 8. 1964.
	:	:
	:	:
Stresses within curved laminated beams of Douglas-fir.	: Norris, C. B.	: USFS Res. Note FPL-020. 1963.
	:	:
	:	:
Effect of joint geometry on tensile strength of finger joints.	: Selbo, M. L.	: Forest Prod. Jour. Sept. 1963.

Title	Author	Publication and date
-------	--------	----------------------

GLUED STRUCTURAL MEMBERS (continued)

Factors affecting strength and design principles of glued laminated construction.	: Freas, A. D.	: FPL Rpt. 2061. 1956. : R&R 1962.
Laminated, bolted, and solid keels for 50-foot Navy motor launch compared for strength.	: Luxford, R. F., & : Krone, R. H.	: FPL Rpt. 1625. 1946. : R&R 1962.
Laminated oak frames for a 50-foot Navy motor launch compared to steam-bent frames.	: Luxford, R. F., & : Krone, R. H.	: FPL Rpt. 1611. 1945. : R&R 1962.
Strength of glued laminated Sitka spruce made up of rotary-cut veneers.	: Luxford, R. F.	: FPL Rpt. 1512. 1944. : R&R 1962.
*Effect of repeated loading and salt-water immersion on the flexural properties of glued-laminated members (coast-type Douglas-fir).	: Werren, Fred	: Bureau of Ships Rpt. : BuS-17. 1962. : CFSTI, AD 288 758, : \$2.60.
End joints of various types in Douglas-fir and white oak compared for strength.	: Luxford, R. F., & : Krone, R. H.	: FPL Rpt. 1622. 1946. : R&R 1961.
*Static and impact bending tests of glued laminated wood.	: James, W. L.	: Bureau of Ships Rpt. : BuS-6. 1960. CFSTI, : AD 245 876.
Stiffness and bending strength of beams laminated from two species of wood.	: Ethington, R. L.	: FPL Rpt. 2156. 1960.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

GLUED STRUCTURAL MEMBERS (continued)

Deflection characteristics of two 20-foot-diameter laminated wood rings subjected to compressive loading along a diameter.	: Werren, Fred, & Ethington, R. L.	: FPL Rpt. 1877. 1960.
	:	:
	:	:
	:	:
	:	:
*Effect of repeated loading and salt-water immersion on the flexural properties of glued-laminated members (Tanalith-treated red oak).	: Werren, Fred	: Bureau of Ships Rpt. BuS-9. 1960. CFSTI, AD 249 631.
	:	:
	:	:
Effect of repeated loading and salt-water immersion on flexural properties of laminated white oak.	: Freas, A. D., & Werren, Fred	: Forest Prod. Jour. Feb. 1959.
	:	:
	:	:
*Design of plywood webs in box beams.	: Forest Products Laboratory	: FPL Rpt. 1318. 1943. R&R 1958. Out of print.
	:	:
*Supplement: Stiffeners in box beams and details of design.	: Lewis, W. C., & Dawley, E. R.	: FPL Rpt. 1318-A. 1943. R&R 1958. Out of print.
	:	:
Supplement: Buckling in shear webs of box and I-beams and the effect upon design criteria.	: Lewis, W. C., Heebink, T. B., Cottingham, W. S., & Dawley, E. R.	: FPL Rpt. 1318-B. 1943. R&R 1960.
	:	:
Supplement: Additional tests of box beams and I-beams to substantiate further the design curves for plywood webs in box beams--tests of plywood webs in the tension field.	: Lewis, W. C., Heebink, T. B., Cottingham, W. S., & Dawley, E. R.	: FPL Rpt. 1318-C. 1944. R&R 1960.
	:	:
	:	:

Title	Author	Publication and date
-------	--------	----------------------

GLUED STRUCTURAL MEMBERS (continued)

Design of plywood webs in box beams	:	:
	:	:
	:	:
Supplement: Buckling and ultimate strengths of shear webs of box beams having plywood face grain direction:	: Lewis, W. C.,	: FPL Rpt. 1318-D. 1944.
parallel or perpendicular to the axis of the beams.	: Heebink, T. B., &	: R&R 1965.
	: Cottingham, W. S.	:
	:	:
	:	:
Supplement: The effect of repeated buckling on the ultimate strengths of box beams with shear webs in the inelastic buckle range.	: Lewis, W. C.,	: FPL Rpt. 1318-E. 1944.
	: Heebink, T. B., &	: R&R 1965.
	: Cottingham, W. S.	:
	:	:
	:	:
Scarf joints prove feasible for large laminated members.	: Werren, Fred	: Wood & Wood Prod.
	:	: July 1956.
	:	:
Glued structural members.	: Forest Products Laboratory	: Separate from Wood Handbook. USDA
	:	: Handb. 72. 1955.
	:	:
*Fabrication and design of glued laminated wood structural members.	: Freas, A. D., &	: USDA Tech. Bul. 1069.
	: Selbo, M. L.	: 1954. Out of print.
	:	:
Stresses in laminated wood construction.	: Forest Products Laboratory	: FPL Tech. Note 140.
	:	: 1952.
	:	:
*The glued laminated wooden arch.	: Wilson, T. R. C.	: USDA Tech. Bul. 691.
	:	: 1939. Out of print.
	:	:
*Structural glued laminated timber.	: U.S. Dept. Com.	: Commercial Std. 253.
	:	: GPO.

Title	Author	Publication and date
-------	--------	----------------------

JOINTS AND FASTENINGS

Performance of container fasteners subjected to static and dynamic withdrawal.	: Kurtenacker, R. S.	: USFS Res. Paper : FPL 29. 1965.
Strength of wood joints made with nails, staples, or screws:	: Scholten, J. A.	: USFS Res. Note : FPL-0100. 1965.
Nail-withdrawal resistance of American woods.	: Forest Products Laboratory	: USFS Res. Note : FPL-093. 1965.
Nailing dense hardwoods.	: Forest Products Laboratory	: USFS Res. Note : FPL-037. 1964.
Performance of joints with eight bolts in laminated Douglas-fir.	: Doyle, D. V.	: USFS Res. Paper : FPL 10. 1964.
Performance of nail-glued joints of plywood to solid wood.	: Doyle, D. V.	: USFS Res. Note : FPL-042. 1964.
Performance of bolted joints in Douglas-fir.	: Doyle, D. V., & Scholten, J. A.	: USFS Res. Paper : FPL 2. 1963.
Bolt-bearing strength of wood and modified wood: Bearing strength of commercial cross banded compreg under aircraft bolts.	: Hunt, P. J., Goodell, H. R., & Phillips, R. S.	: FPL Rpt. 1523-B. 1946. : R&R 1962.
Supplement: Bearing strength of commercial aircraft plywood under aircraft bolts.	: McLeod, A. M.	: FPL Rpt. 1523-C. 1946. : R&R 1962.

Title	Author	Publication and date
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JOINTS AND FASTENINGS (continued)

Bolt-bearing strength of wood	:	:
and modified wood: Bearing	:	:
strength of commercial cross	:	:
banded compreg under air-	:	:
craft bolts.	:	:
Supplement: Bearing strength	Sanborn, W. A.,	: FPL Rpt. 1523-D. 1946.
of wood members reinforc-	: Goodell, H. R.,	: R&R 1962.
ed with plywood and cross-	: Ely, A. W., &	:
banded compreg under	: Phillips, R. S.	:
single and multiple aircraft	:	:
bolts.	:	:
Performance comparison of	: Heebink, T. B.	: FPL Rpt. 2238. 1962.
slender and standard spirally	:	:
grooved pallet nails.	:	:
Proceedings of the symposium	: Forest Products	: FPL Rpt. 2241. 1962.
on fastenings for wood in	: Laboratory	:
house construction.	:	:
Strong joints + strong materi-	: Forest Products	: FPL Tech. Note 262.
als properly used = strong	: Laboratory	: 1962.
buildings.	:	:
Lateral loading evaluation of	: Kurtenacker, R. S.	: Reprint from Mechan-
staples and T-nails.	:	: cal Fasteners for
	:	: Wood, No. 1003,
	:	: Building Res. Inst.,
	:	: Inc. 1962.
Effect of nail points on the	: Scholten, J. A.	: FPL Rpt. 1226. 1930.
withdrawal resistance of plain	:	: R&R 1962.
nails.	:	:
Theoretical design of a nailed	: Kuenzi, E. W.	: FPL Rpt. 1951. Rev.
or bolted joint under lateral	:	: 1955. R&R 1960.
load.	:	:

Title	Author	Publication and date
<u>JOINTS AND FASTENINGS (continued)</u>		
Spacing of sixpenny and eight-penny wire nails in Douglas-fir multi-nail joints.	: Ramos, A. N.	: FPL Rpt. 2155. 1960.
	:	:
	:	:
How to avoid nail popping in dry-wall construction.	: Luxford, R. F.	: FPL Rpt. 2036. 1955.
	:	: R&R 1960.
	:	:
Strength of screw fastenings in plywood.	: Forest Products Laboratory	: FPL Tech. Note 149. 1958.
	:	:
General observations on the nailing of wood.	: Forest Products Laboratory	: FPL Tech. Note 243. 1957.
	:	:
Timber fastenings.	: Forest Products Laboratory	: Separate from Wood Handbook. USDA Agr. Handb. 72. 1955.
	:	:
*Why nails hold.	: Markwardt, L. J., & Gahagan, J. M.	: Wood Prod., Sept. 1951. Pack. & Shipping, Oct. 1951.
	:	:
Nail-holding properties of southern hardwoods.	: Scholten, J. A.	: South. Lbrmn., Dec. 1950.
	:	:
Strength of nailed joints in frame walls.	: Scholten, J. A., & Molander, E. G.	: Agr. Engin., Nov. 1950.
	:	:
Corrosion of metal fastenings in zinc-chloride-treated wood after 20 years.	: Baechler, R. H.	: Amer. Wood-Pres. Assoc. Proc. 1949.
	:	:
	:	:
*Technique of house nailing.	: Forest Products Laboratory	: Housing & Home Finance Agency. 1947. GPO, 20 cents.
	:	:
*Timber connector joints: Their strength and design.	: Scholten, J. A.	: USDA Tech. Bul. 865. 1944. Out of print.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

JOINTS AND FASTENINGS (continued)

Lag screw joints: Their behavior and design.	: Newlin, J. A., & Gahagan, J. M.	: USDA Tech. Bul. 597. 1938.
*The bearing strength of wood under bolts.	: Trayer, G. W.	: USDA Tech. Bul. 332. 1932. Out of print.

METHODS OF DETERMINING PROPERTIES

Elastic and Strength Properties

Modulus of elasticity of wood determined by dynamic methods.	: Bell, E. R., Peck, E. C., & Krueger, N. T.	: FPL Rpt. 1977. 1954. R&R 1965.
The influence of the form of a wooden beam on its stiffness and strength--	:	:
I - Deflection of beams with special reference to shear deformations.	: Newlin, J. A., & Trayer, G. W.	: FPL Rpt. 1309. 1941. R&R 1965. Reprinted from NACA Rpt. 180.
III - Stresses in wood members subjected to combined column and beam action.	: Newlin, J. A., & Trayer, G. W.	: FPL Rpt. 1311. 1941. R&R 1965. Reprinted from NACA Rpt. 188.
Form factors of beams subjected to transverse loading only.	: Newlin, J. A., & Trayer, G. W.	: FPL Rpt. 1310. 1941. R&R 1965. Reprinted from NACA Rpt. 181.
Comparison of block shear methods for determining shearing strength of solid woods.	: Hilbrand, H. C.	: USFS Res. Note FPL-030. 1964.
Effect of confining pressure on the compression parallel-to-the-grain strength of small clear wood specimens.	: Wilkinson, T. L.	: USFS Res. Note FPL-057. 1964.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

METHODS OF DETERMINING PROPERTIES (continued)

Elastic and Strength Properties (continued)

*Tension test methods for wood, wood-base materials, and sandwich construction.	:	Markwardt, L. J., & Youngquist, W. G.	:	FPL Rpt. 2055. 1956. R&R 1962. Out of print. ASTM Spec. Tech. Pub. 194. 1957.
	:		:	
The effect of a change in testing speed and span on the flexural strength of insulating and structural fiberboards and a proposed new method of test.	:	Youngquist, W. G., & Munthe, B. P.	:	FPL Rpt. 1717. 1948. R&R 1962.
	:		:	
Stress-strain relations in wood and plywood considered as orthotropic materials.	:	Forest Products Laboratory	:	FPL Rpt. 1503. 1956. R&R 1962.
	:		:	
Strength of orthotropic materials subjected to combined stresses.	:	Norris, C. B.	:	FPL Rpt. 1816. 1950. R&R 1962.
	:		:	
Methods of calculating the strength and modulus of elasticity of plywood in compression.	:	Liska, J. A.	:	FPL Rpt. 1315. Rev. 1950. R&R 1960.
	:		:	
*Methods for determining the elastic constants of nonmetallic materials.	:	Kuenzi, E. W.	:	ASTM Spec. Tech. Pub. 118. 1952.
	:		:	

Growth Features

A simple device for detecting compression wood.	:		:	FPL Rpt. 1390. Rev. 1953. Reprinted 1962.
---	---	--	---	---

Title	Author	Publication and date
-------	--------	----------------------

METHODS OF DETERMINING PROPERTIES (continued)

Growth Features (continued)

Detection of compression failures in wood.	:	: FPL Rpt. 1588. 1944.
	:	: R&R 1961.
	:	:
Instrument for rapidly measuring slope of grain in lumber.	: Anderson, E. A.,	: FPL Rpt. 1592. 1945.
	: Koehler, A., &	: R&R 1960.
	: Krone, R. H.	:
	:	:
Guide to determining slope of grain in lumber and veneer.	: Koehler, A.	: FPL Rpt. 1585. 1943.
	:	: R&R 1960.
	:	:
Compression wood: Importance and detection in aircraft veneer and plywood.	:	: FPL Rpt. 1586. 1943.
	:	: R&R 1959.
	:	:

Specific Gravity

Methods of determining the specific gravity of wood.	: Forest Products Laboratory	: FPL Tech. Note B-14. 1956.
	:	:
*Methods for determining the specific gravity of wood and wood-base materials.	: Markwardt, L. J.,	: ASTM Proc. 1946.
	: & Paul, B. H.	:
	:	:

Testing Procedures

Results of impact tests to compare the pendulum impact and toughness test methods.	: Drow, J. T.,	: FPL Rpt. 2109. 1958.
	: Markwardt, L. J.,	: R&R 1965.
	: & Youngquist, W.G.	:
	:	:
Fabrication of small clear specimens of timber for strength tests.	: Bellosillo, S. B.	: FPL Rpt. 2074. 1957.
	:	: R&R 1965.
	:	:

Title	:	Author	:	Publication and date
	:		:	

METHODS OF DETERMINING PROPERTIES (continued)

Testing Procedures (continued)

Performance of bonded wire strain gages on wood.	: Youngquist, W. G.	: FPL Rpt. 2087. 1957.
	:	: R&R 1965.
	:	:
Methods for determining tensile properties of paper.	: Setterholm, V. C.,	: FPL Rpt. 2066. 1956.
	: & Kuenzi, E. W.	: R&R 1962.
	:	:
Forest Products Laboratory's toughness testing machine.	:	: FPL Rpt. 1308. 1941.
	:	: R&R 1961.
	:	:
Apparatus for determination of surface profile.	: Setterholm, V. C.,	: FPL Rpt. 2130. 1958.
	: & James, W. L.	:
	:	:
Comparison of standard block-shear test with the panel-shear test.	: Norris, C. B.	: Forest Prod. Jour.,
	:	: Sept. 1957.
	:	:
	:	:
Climbing peel test for strength of adhesive bonds.	: Werren, Fred, &	: Modern Plastics,
	: Eickner, H. W.	: Dec. 1956.
	:	:
*A strain gage for the measurement of strains in adhesive bonds.	: Norris, C. B.,	: ASTM Bul. 218,
	: James, W. L., &	: Dec. 1956.
	: Drow, J. T.	:
	:	:
*Means of determining the hardness of wood and modified woods over a broad specific gravity range.	: Weatherwax, R. C.,	: ASTM Bul., Aug. 1948.
	: Erickson, E. C. O.,	:
	: & Stamm, A. J.	:
	:	:
	:	:
*Some applications of simulated service testing to nonmetallic materials.	: Freas, A. D.	: ASTM Bul., Aug. 1946.
	:	:
	:	:

Title	Author	Publication and date
-------	--------	----------------------

METHODS OF DETERMINING PROPERTIES (continued)

Testing Procedures (continued)

*Effect of specimen shape on the compressive strength properties of laterally supported plywood specimens.	: Liska, J. A.	: ASTM Bul., Mar. 1945.
	:	:
	:	:
	:	:
*Methods of static tests of wood poles.	: ASTM	: ASTM Std. D 1036.
	:	:
	:	:
*Methods of evaluating the properties of wood-base fiber and particle panel materials.	: ASTM	: ASTM Std. D 1037.
	:	:
	:	:
*Methods of conducting strength tests of panels for building construction.	: ASTM	: ASTM Std. E 72.
	:	:
	:	:
*Methods of testing truss assemblies.	: ASTM	: ASTM Std. E 73.
	:	:
	:	:
*Standard methods of conducting static tests of timbers in structural sizes.	: ASTM	: ASTM Std. D 198.
	:	:
	:	:
*Standard methods of testing small clear specimens of timber.	: ASTM	: ASTM Std. D 143.
	:	:
	:	:
*Standard methods of testing plywood, veneer, and other wood and wood-base materials.	: ASTM	: ASTM Std. D 805.
	:	:
	:	:
*Tentative methods of test for structural insulating roof deck.	: ASTM	: ASTM Std. D 2164.
	:	:
	:	:

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

METHODS OF DETERMINING PROPERTIES (continued)

Testing Procedures (continued)

*Methods of testing structural	: ASTM	: ASTM Std. C 209
insulating boards made from	:	:
vegetable fibers.	:	:

MODIFIED WOODS AND PAPER LAMINATES

Mechanical properties of laminated modified woods.	: Erickson, E. C. O.	: FPL Rpt. 1639. 1947.
	:	: R&R 1965.
	:	:
Factors affecting the strength of papreg: Some strength properties at elevated and subnormal temperatures.	: Meyer, H. R., & Erickson, E. C. O.	: FPL Rpt. 1521. 1945.
	:	: R&R 1965.
	:	:
	:	:
Supplement: Effect of moisture on certain strength properties of papreg.	: Meyer, H. R., & Erickson, E. C. O.	: FPL Rpt. 1521-B.
	:	: 1945. R&R 1962.
	:	:
	:	:
Supplement: Effect of repeated cycles of freezing and thawing on certain strength properties of papreg.	: Meyer, H. R., & Erickson, E. C. O.	: FPL Rpt. 1521-C.
	:	: 1945. R&R 1962.
	:	:
	:	:
Influence of manufacturing variables on the impact resistance of resin-treated wood.	: Millett, M. A., Seborg, R. M., & Stamm, A. J.	: FPL Rpt. 1386. 1943.
	:	: R&R 1962.
	:	:
	:	:
Certain properties of papreg as affected by laminating pressure, resin content, and volatile content.	: Seidl, R. J., Mackin, G. E., & Baird, P. K.	: FPL Rpt. 1394. 1943.
	:	: R&R 1962.
	:	:
	:	:

	:	:
Title	:	Author
	:	Publication and date
	:	

MODIFIED WOODS AND PAPER LAMINATES (continued)

Modified woods.	: Stamm, A. J.	: FPL Rpt. 2192. 1960.
	:	:
Modified woods and paper-base laminates.	: Forest Products Laboratory	: Separate from Wood Handbook. USDA Agr. Handb. 72. 1955.
	:	:
*Paper-base laminates offer high strength.	: Erickson, E. C. O., & Mackin, G. E.	: Amer. Soc. Mech. Engin. Trans., May 1945; Plastics, Feb. 1945.
	:	:

PLYWOOD AND VENEER

Effect of moisture on the compressive, bending, and shear strengths, and on the toughness of plywood.	: Drow, J. T.	: FPL Rpt. 1519. 1945.
	:	: R&R 1965.
	:	:
Linear movement of plywood and flakeboards as related to the longitudinal movement of wood.	: Heebink, B. G., Kuenzi, E. W., & Maki, A. C.	: USFS Res. Note FPL-073. 1964.
	:	:
Bending strength and stiffness of plywood.	: Forest Products Laboratory	: USFS Res. Note FPL-059. 1964.
	:	:
Manufacture and general characteristics of flat plywood.	: Forest Products Laboratory	: USFS Res. Note FPL-064. 1964.
	:	:
Stress-strain relations in wood and plywood considered as orthotropic materials.	: Forest Products Laboratory	: FPL Rpt. 1503. 1944.
	:	: R&R 1962.
	:	:
Bolt-bearing strength of wood and modified wood: Bearing strength of commercial aircraft plywood under aircraft bolts.	: McLeod, A. M.	: FPL Rpt. 1523-C. 1946.
	:	: R&R 1962.
	:	:

	:	:
Title	:	Author
	:	Publication and date
-----	-----	-----

PLYWOOD AND VENEER (continued)

Strength of orthotropic materials subjected to combined stresses.	: Norris, C. B.	: FPL Rpt. 1816. 1950.
	:	: R&R 1962.
	:	:
	:	:
Torsional buckling of longitudinally stiffened, thin-walled, plywood cylinders.	: Kuenzi, E. W., &	: FPL Rpt. 1563. 1948.
	: Norris, C. B.	: R&R 1962.
	:	:
	:	:
*Longitudinally stiffened thin-walled plywood cylinders in axial compression.	: Kuenzi, E. W., &	: FPL Rpt. 1562. 1948.
	: Norris, C. B.	: R&R 1962. Out of
	:	: print.
	:	:
The effective stiffness of a stiffener attached to a flat plywood plate.	: Smith, C. B.,	: FPL Rpt. 1557. 1946.
	: Heebink, T. B., &	: R&R 1962.
	: Norris, C. B.	:
	:	:
Buckling of stiffened, flat, plywood plates in compression. A single stiffener perpendicular to stress.	: Heebink, T. B.,	: FPL Rpt. 1553. 1946.
	: March, H. W., &	: R&R 1962.
	: Norris, C. B.	:
	:	:
	:	:
Supplement: A single stiffener perpendicular to stress. Face grain of plywood at 45° to its edges.	: Heebink, T. B., &	: FPL Rpt. 1553-A. 1946.
	: Norris, C. B.	: R&R 1962.
	:	:
	:	:
Supplement: A single stiffener parallel to stress.	: Smith, C. B.,	: FPL Rpt. 1553-B. 1947.
	: Ringelstetter, L.A.,	: R&R 1960.
	: Norris, C. B.	:
	:	:
	:	:
Supplement: A single stiffener parallel to stress. Face grain of plywood at 45° to its edges.	: Ringelstetter, L.A.,	: FPL Rpt. 1553-C. 1948.
	: & Norris, C. B.	: R&R 1962.
	:	:
	:	:

Title	Author	Publication and date
-------	--------	----------------------

PLYWOOD AND VENEER (continued)

Buckling of stiffened, flat, plywood plates in compression. A single stiffener perpendicular to stress.	:	:
Supplement: The effect of a stiffener on the maximum load of flat plywood plates in edgewise compression, with the face grain at 0° and 90° to the load: A single stiffener parallel to the direction of loading load: edges clamped, others simply supported.	: Ringelstetter, L. A., & Norris, C. B.	: FPL Rpt. 1553-D. 1949. : R&R 1959.
Rectangular plywood plates with the grain of the face plies inclined to the edges.	: March, H. W.	: FPL Rpt. 1507. 1944. : R&R 1962.
Thin-walled plywood cylinders in bending.	: Kuenzi, E. W.	: FPL Rpt. 1502. 1944. : R&R 1962.
Compression, tension, and shear tests on yellow-poplar plywood panels of sizes that do not buckle with tests made at various angles to the face grain.	: Norris, C. B., & McKinnon, P. F.	: FPL Rpt. 1328. 1946. : R&R 1962.
Supplement: Compression tests.	: Norris, C. B., & McKinnon, P. F.	: FPL Rpt. 1328-A. 1943. : R&R 1962.
Supplement: Tension tests.	: Norris, C. B., & McKinnon, P. F.	: FPL Rpt. 1328-B. 1945. : R&R 1962.
Supplement: Shear tests.	: Norris, C. B., & McKinnon, P. F.	: FPL Rpt. 1328-C. 1945. : R&R 1962.

Title	Author	Publication and date
-------	--------	----------------------

PLYWOOD AND VENEER (continued)

A comparison of the buckling strength of thin-walled cylindrical and barrel-shaped plywood shells.	: Kuenzi, E. W.	: FPL Rpt. 1323. 1943. : R&R 1962.
Buckling of long, thin, plywood cylinders in axial compression.	: March, H. W., : Norris, C. B., & : Kuenzi, E. W.	: FPL Rpt. 1322. 1943. : R&R 1962.
Supplement: Mathematical treatment.	: March, H. W.	: FPL Rpt. 1322-A. 1943. : R&R 1962.
Supplement: Experimental treatment.	: Norris, C. B., & : Kuenzi, E. W.	: FPL Rpt. 1322-B. 1943. : R&R 1956.
Buckling of flat plywood plates in compression, shear, or combined compression and shear.	: March, H. W.	: FPL Rpt. 1316. 1942. : R&R 1962.
Supplement: Buckling of flat isotropic plates in compression, shear, or combined compression and shear.	: March, H. W.	: FPL Rpt. 1316-A. 1942. : R&R 1960.
Supplement: Buckling of plates of any symmetrical construction. Edges simply supported. Buckling of plates with two edges clamped.	: March, H. W.	: FPL Rpt. 1316-B. 1942. : R&R 1962.
Supplement: Plates having the grain of the face plies inclined to the edges.	: Forest Products : Laboratory	: FPL Rpt. 1316-C. 1943. : R&R 1962.

Title	Author	Publication and date
-------	--------	----------------------

PLYWOOD AND VENEER (continued)

Buckling of flat plywood plates		
in compression, shear, or		
combined compression and		
shear.		
Supplement: Buckling of flat	Norris, C. B., &	FPL Rpt. 1316-D. 1943.
plywood plates in compres-	Voss, A. W.	R&R 1962.
sion with face grain at 0°		
and 90° to load.		
Supplement: Effective width	Norris, C. B., &	FPL Rpt. 1316-E. 1943.
of thin plywood plates in	Voss, A. W.	R&R 1961.
compression with the face		
grain at 0° and 90° to load.		
Supplement: Buckling of	March, H. W.	FPL Rpt. 1316-F. 1943.
long, flat plywood plates		R&R 1959.
under uniform shear.		
Grain of face plies inclined		
to edges. Edges clamped.		
Supplement: Buckling tests	Norris, C. B., &	FPL Rpt. 1316-G. 1943.
of flat plywood plates in	Voss, A. W.	R&R 1960.
compression with face grain:		
at 15°, 30°, 45°, 60°, and		
75° to load.		
Supplement: Buckling of flat	Voss, A. W., &	FPL Rpt. 1316-H. Rev.
plywood plates in uniform	Norris, C. B.	1950. R&R 1962.
shear with face grain at		
angles of 0°, ±45°, and 90°.		
Supplement: Effective width	Norris, C. B.,	FPL Rpt. 1316-I. 1945.
of thin plywood plates at	Voss, A. W., &	R&R 1962.
maximum load in compres-	McKinnon, P. F.	
sion with the face grain at		
0°, 15°, 30°, 45°, 60°, 75°:		
and 90° to load.		

	:	:
Title	:	Author
	:	Publication and date
-----	-----	-----

PLYWOOD AND VENEER (continued)

Buckling of flat plywood plates :	:	:
in compression, shear, or :	:	:
combined compression and :	:	:
shear. :	:	:
:	:	:
Supplement: Buckling tests :	Ringelstetter, L. A. :	FPL Rpt. 1316-J. 1949.
of flat plywood plates in :	:	R&R 1962.
compression with face :	:	:
grain 45° to load--Loaded :	:	:
edges clamped, others :	:	:
simply supported. :	:	:
:	:	:
Properties of ordinary wood :	Forest Products :	FPL Tech. Note 131.
compared with plywood :	Laboratory :	Reissued 1962.
:	:	:
Effect of circumferential stiff- :	Heebink, T. B., & :	FPL Rpt. 1812. 1950.
eners on the buckling proper- :	Norris, C. B. :	R&R 1961.
ties of thin, curved plywood :	:	:
panels in axial compression. :	:	:
:	:	:
Effect of veneer thickness and :	Norris, C. B., :	FPL Rpt. 1801. 1948.
grain direction on the shear :	Werren, F., & :	R&R 1961.
strength of plywood. :	McKinnon, P. F. :	:
:	:	:
Effect of axial stiffeners on :	Werren, F., & :	FPL Rpt. 1567. 1948.
the buckling properties of thin :	Norris, C. B. :	R&R 1961.
curved plywood plates in axial :	:	:
compression. :	:	:
:	:	:
Effect of 5,000 cycles of re- :	Kommers, W. J. :	FPL Rpt. 1305. 1943.
peated bending stresses on :	:	R&R 1960.
5-ply Sitka spruce plywood. :	:	:
:	:	:
Buckling of thin-walled plywood :	March, H. W., :	FPL Rpt. 1529. 1945.
cylinders in torsion. :	Norris, C. B., :	R&R 1960.
:	Smith, C. B., & :	:
:	Kuenzi, E. W. :	:

Title	Author	Publication and date
-------	--------	----------------------

PLYWOOD AND VENEER (continued)

Buckling of thin, curved, plywood plates in axial compression.	Kuenzi, E. W.	FPL Rpt. 1508, 1944. R&R 1960.
Thin-walled plywood cylinders in bending and torsion.	Kuenzi, E. W.	FPL Rpt. 1501. 1944. R&R 1960.
Plastic flow (creep) properties of two yellow birch plywood plates under constant shear stress.	Norris, C. B., & Kommers, W. J.	FPL Rpt. 1324. 1943. R&R 1960.
*Summary of formulas for flat plates of plywood under uniform or concentrated loads.	March, H. W.	FPL Rpt. 1300. 1941. R&R 1959. Out of print.
Critical buckling strength of stiffened flat plywood plates in compression and shear-- Closely spaced stiffeners.	Norris, C. B., Kommers, W. J. & McKinnon, P. F.	FPL Rpt. 1800. 1948. R&R 1956.
Plywood and other crossbanded products.	Forest Products Laboratory	Separate from Wood Handbook. USDA Agr. Handb. 72. 1955.
Methods of calculating the strength and modulus of elasticity of plywood in compression.	Liska, J. A.	FPL Rpt. 1315. Rev. 1955. R&R 1960.
*Effect of length on the buckling stresses of thin-walled plywood cylinders in axial compression.	Kuenzi, E. W.	FPL Rpt. 1514. 1948. Out of print.
*Some properties of paper-over-laid veneer and plywood.	Forest Products Laboratory	Housing & Home Finance Agency Tech. Paper No. 9. 1948.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

PLYWOOD AND VENEER (continued)

*Design of plywood webs for airplane wing beams.	: Trayer, G. W.	: NACA Rpt. 344. 1930.
	:	: Out of print.
	:	:
*Hardwood plywood.	: U.S. Department of Commerce	: Commercial Std. CS 35. GPO, 15 cents.
	:	:
*Douglas fir plywood.	: U.S. Department of Commerce	: Commercial Std. CS 45. GPO, 15 cents.
	:	:
*Western softwood plywood.	: U.S. Department of Commerce	: Commercial Std. CS 122. GPO, 15 cents.
	:	:
*Standard definitions of terms relating to veneer and plywood.	: ASTM	: ASTM Std. D 1038.
	:	:
	:	:

POLES AND PILING

*Strength and related properties of wood poles.	: Wood, L. W., Erickson, E.C.O., & Dohr, A. W.	: ASTM Spec. Pub. 295. 1960. \$5.
	:	:
Poles, piling, and ties.	: Forest Products Laboratory	: Separate from Wood Handbook, USDA Agr. Handb. 72. 1955.
	:	:
*Strength of western larch and its suitability for poles.	: Drow, J. T.	: Timberman. July 1949.
	:	:

PROPERTIES

Mechanical

Bearing strength of wood at angle to the grain.	:	: FPL Rpt. 1203. 1939.
	:	: Rev. 1956. R&R 1965.

Title	Author	Publication and date
-------	--------	----------------------

PROPERTIES (continued)

Mechanical (continued)

Distribution of strength values in wood for aircraft construction.	: Drow, J. T., : Clark, M. E., & : Wilson, T. R. C.	: FPL Rpt. 1515. 1946. : R&R 1965. :
A method for rapid measurement of the rate of decay of free vibrations.	: James, W. L. : :	: FPL Rpt. 2154. 1959. : Rev. 1956. R&R 1965. :
Comparative strength of air-dried and kiln-dried wood.	: :	: USFS Res. Note : FPL-055. 1964. :
Vibration, static strength, and elastic properties of clear Douglas-fir at various levels of moisture content.	: James, W. L. : : :	: Forest Prod. Jour. : Sept. 1964. : :
Research needed on tensile strength of wood.	: Werren, F. : :	: Forest Prod. Jour. : July 1964. :
Dynamic strength and elastic properties of wood.	: James, W. L. : :	: Forest Prod. Jour. : June 1962. :
Plastic bending of wood beams.	: Norris, C. B. :	: FPL Rpt. 2225. 1962. :
Stress-strain distribution in Douglas-fir beams within the plastic range.	: Ramos, A. N. : :	: FPL Rpt. 2231. 1961. : :
Recent progress toward an understanding of the physical and mechanical properties of wood.	: Youngs, R. L. : : :	: Forest Prod. Jour. : May 1961. : :
Standard terms for describing wood.	: :	: FPL Rpt. 1169. Rev. : 1956. R&R 1961.

Title	:	Author	:	Publication and date

PROPERTIES (continued)

Mechanical (continued)

Strength values of clear wood and related factors.	: Forest Products Laboratory	: Separate from Wood Handbook. USDA Agr. Handb. 72. 1955.
	:	:
Red hickory as strong as white hickory.	: Forest Products Laboratory	: FPL Tech. Note 171. 1953.
	:	:
Strength of southern pine and Douglas-fir compared.	: Forest Products Laboratory	: FPL Tech. Note 119. 1952.
	:	:
*Stress distribution in a beam of orthotropic material subjected to a concentrated load.	: Smith, C. B., & Voss, A. W.	: NACA Tech. Note 1486. 1948.
	:	:
Effect of elliptic or circular holes on the stress distribution in plates of wood or plywood considered as orthotropic materials.	: Forest Products Laboratory	: FPL Rpt. 1510. 1944. R&R 1962.
	:	:
Quality comparisons of hardwoods from the southern Appalachians with that of northern growth.	: Paul, B. H.	: South. Lbrmn., Aug. 1, 1941; Wood Products, July 1941.
	:	:
*Strength and related properties of woods grown in the United States.	: Markwardt, L. J., & Wilson, T. R. C.	: USDA Tech. Bul 479. 1935. Out of print.
	:	:
The distribution and the mechanical properties of Alaska woods.	: Markwardt, L. J.	: USDA Tech. Bul. 226. 1931.
	:	:
*Comparative strength properties of woods grown in the United States.	: Markwardt, L. J.	: USDA Tech. Bul. 158. 1930. GPO, 10 cents.
	:	:

Title	Author	Publication and date
-------	--------	----------------------

PROPERTIES (continued)

Shrinkage

Longitudinal shrinkage of wood.	: Koehler, A.	: FPL Rpt. 1093. 1930.
	:	: Rev. 1960. FPL
	:	: Tech. Note 234. 1952.

Woodworking

*Machining and related characteristics of United States hardwoods.	: Davis, E. M.	: USDA Tech. Bul. 1267.
	:	: 1962. GPO, 35 cents.
	:	:
	:	:
Properties, selection, and suitability of woods for wood-working.	: Coleman, D. G.	: Indus. Arts and Voc.
	:	: Ed., Dec. 1940.
	:	: R&R 1960.

SPECIES

American Woods

U.S. Forest Service American Wood Series

Alder, red	Maple
Baldcypress	Oaks
Buckeye	Osage-orange
Cedar, Alaska-	Pine, eastern white
Cedar, eastern red-	Pine, ponderosa
Cedar, incense-	Pine, red
Cedar, northern white-	Pine, southern
Cedar, Port Orford white-	Pine, sugar
Cedar, western red-	Pine, western white
Fir, Douglas	Poplar-yellow
Fir, noble	Redwood
Fir, white	Spruce, Sitka
Hackberry	Sweetgum
Hemlock, eastern	Sycamore, American
Hemlock, western	Tamarack
Holly, American	Tupelo
Larch, western	Walnut, black
Locust, black	Willow, black

Species :	Title :	Author :	Publication and date :
-----:	-----:	-----:	-----:

SPECIES (continued)

American Woods (continued)

Alaska	: Characteristics of	: Forest Products	: USFS Res. Paper
	: Alaska woods.	: Laboratory	: FPL 1. 1963.
	:	:	:
Aspen	: *Mechanical properties	: Johnson, R. P. A.	: Lake States Forest
	: of aspen.	:	: Exp. Sta. Aspen
	:	:	: Rpt. No. 7. 1947.
	:	:	:
Elm	: Southern hard elm	: Dohr, A. W.	: South. Lbrmn. Dec. 15,
	: strength properties	:	: 1953.
	: compare favorably	:	:
	: with rock elm.	:	:
	:	:	:
	: Southern hard elms	: Baudendistel, M.E.,	: South. Lbrmn. Dec. 15,
	: as substitutes for	: & Paul, B. H.	: 1944.
	: rock elm.	:	:
	:	:	:
Fir	: Some physical and	: Paul, B. H., Dohr,	: FPL Rpt. 2168. 1959.
	: mechanical proper-	: A. W., & Drow, J.T.	: R&R 1965.
	: ties of noble fir.	:	:
	:	:	:
	: Strength and related	: Gerhards, C. C.	: USFS Res. Paper
	: properties of white	:	: FPL 14. 1964.
	: fir.	:	:
	:	:	:
	: *Properties of white	: Johnson, R. P. A.,	: USDA Tech. Bul. 408.
	: fir and their relation	: & Brundage, M. R.	: 1934. Out of print.
	: to the manufacture	:	:
	: and uses of wood.	:	:
	:	:	:
Hawaii	: Physical and mechan-	: Gerhards, C. C.	: USFS Res. Paper
	: ical properties of	:	: FPL 23. 1965.
	: saligna eucalyptus	:	:
	: grown in Hawaii.	:	:

Species :	Title :	Author :	Publication and date :

SPECIES (continued)

American Woods (continued)

Hawaii (cont.)	Limited evaluation of physical properties of Nepal alder grown in Hawaii	Gerhards, C. C.	USFS Res. Note FPL-036. 1964.
	Hardness, density, and shrinkage characteristics of silk-oak from Hawaii.	Youngs, R. L.	USFS Res. Note FPL-074. 1964.
	Physical, mechanical, and other properties of five Hawaiian woods.	Youngs, R. L.	FPL Rpt. 2191. 1960.
Hemlock:	Strength and related properties of western hemlock.	Gerhards, C. C.	USFS Res. Paper FPL 28. 1965.
	Strength and related properties of mountain hemlock.	Youngs, R. L.	USFS Res. Paper FPL 3. 1963.
	Properties of western hemlock and their relation to uses of the wood.	Johnson, R. P. A., & Gibbons, W. H.	USDA Tech. Bul. 139. 1929.
Hickory	A tone test for hickory.	Heck, G. E.	South. Lbrmn. Dec. 15, 1949.
	The quality of Appalachian hickory.	Paul, B. H.	South. Lbrmn. Apr. 6, 1929.

Species :	Title :	Author :	Publication and date :
-----:	-----:	-----:	-----:

SPECIES (continued)

American Woods (continued)

Larch	*Properties of western larch and their relation to uses of the wood.	Johnson, R. P. A., & Bradner, M. I.	: USDA Tech. Bul. 285. 1932. Out of print.
Oak	Some properties of California white oak and Oregon white oak.	Paul, B. H., Dohr, A. W., & Drow, J. T.	: FPL Rpt. 2135. 1958. R&R 1965.
Pine	Mechanical properties of Coulter pine from California.	Dohr, A. W.	: FPL Rpt. 2102. 1958. R&R 1965.
	Mechanical properties of ponderosa pine from the Black Hills.	Drow, J. T., Dohr, A. W., & Bellosillo, S.	: FPL Rpt. 2090. 1957. R&R 1965.
	Lodgepole pine.	Zischke, D. A.	: FPL Rpt. 2052. 1956.
	Strength of Virginia pine established.	Dohr, A. W.	: South. Lbrmn. Dec. 15, 1950.
	The white pine group.	Forest Products Laboratory	: FPL Tech. Note 215. 1957.
Redwood	The strength and related properties of redwood.	Luxford, R. F., & Markwardt, L. J.	: USDA Tech. Bul. 305. 1932.
Spruce	Mechanical properties of Engelmann spruce.	Drow, J. T.	: FPL Rpt. 1944-4. Rev. 1960.
Tanoak	Specific gravity, shrinkage, and strength of tanoak.	Paul, B. H., Dohr, A. W., & Drow, J. T.	: FPL Rpt. 2041. 1955. R&R 1960.

Species :	Title :	Author :	Publication and date :
-----:	-----:	-----:	-----:

SPECIES (continued)

American Woods (continued)

Yellow- : Survey of strength and: Luxford, R. F., & : FPL Rpt. 1516. Rev.
 poplar : related properties of: Wood, L. W. : 1953. R&R 1965.
 : yellow-poplar. : :

Foreign Woods

Leaflets on the following foreign woods are issued by the Forest Service,
 U.S. Department of Agriculture:

Balsa	Lignumvitae
Brazilian araucaria (Parana pine)	Mahogany
Greenheart	Okoume
Iroko	Teak
Lauans, the	

Other general reports on foreign woods issued by the Forest Products Laboratory are named in the list of publications on the structure and identification of wood described on page 54.

Balsa	: Strength and related	: Weipking, C. A., &	: FPL Rpt. 1511. 1944.
	: properties of balsa	: Doyle, D. V.	: R&R 1960.
	: and quipo woods.	:	:
	:	:	:
Bamboo	: Properties of some	: Heck, G. E.	: FPL Rpt. 1765. 1949.
	: bamboos cultivated in:	:	: R&R 1962.
	: the Western Hemi-	:	:
	: sphere.	:	:
	:	:	:
Brazil	: Mechanical properties:	: Dohr, A. W.	: South. Lbrmn. Feb. 1,
	: of Brazilian parana	:	: 1953.
	: pine.	:	:
	:	:	:
Canada	: *Canadian woods, their:	: Canada Department	: 2nd ed. 1951. \$3.
	: properties and uses.	: of Forestry	:

Species :	Title :	Author :	Publication and date :
-----:	-----:	-----:	-----:

SPECIES (continued)

Foreign Woods (continued)

Carib- bean	: *Present and potential : commercial timbers : of the Caribbean.	: Longwood, F. R.	: USDA Handb. 207. 1962. : GPO, \$1.
Imported:	: Characteristics of : some imported woods:	: Kukachka, B. F.	: FPL Rpt. 2242. 1962.
Liberia	: The woods of Liberia.	: Kryn, J. M., & : Fobes, E. W.	: FPL Rpt. 2159. 1959.
Philip- pines	: *The mechanical and : related properties of : Philippine woods.	: Lauricio, F. M., & : Bellosillo, S. B.	: The Lbrmn. (Philip- : pines). Dec. 1963- : Jan. 1964.
Puerto Rico	: Some strength and re- : lated properties of : Yagrumo hembra : (<u>Cecropia peltata</u>) : from Puerto Rico.	: Bendtsen, B. A.	: USFS Res. Note : FPL-053. 1964.
	: *Puerto Rican Woods-- : Their machining, : seasoning and related : characteristics.	: Longwood, F. R.	: USDA Handb. 205. 1961. : GPO, 65 cents.

STRUCTURAL SANDWICH CONSTRUCTIONS AND MATERIALS

The following publications relate, in general, to structural sandwich constructions made with wood or wood-base materials. Many more highly technical reports have been prepared by the Laboratory on sandwich design criteria. Theoretical work is applicable to all constructions, but empirical data have been obtained primarily on the types of construction used for aircraft and other flight vehicles. A list of these additional publications is available on request, namely "Forest Products Laboratory List of Publications on Structural Sandwich, Plastic Laminates, and Wood-Base Components," FPL Rpt. 64-008.

Title	Author	Publication and date
STRUCTURAL SANDWICH CONSTRUCTIONS AND MATERIALS (continued)		
Durability of resin-treated paper honeycomb core.	: Boller, K. H.	: FPL Rpt. 2158. 1959. : R&R 1965.
Effects of shear deformation in the core of a flat rectangular sandwich panel:	:	:
Supplement: Compressive buckling of sandwich panels having dissimilar facings of unequal thickness.	: Ericksen, W. S., : & March, H. W.	: FPL Rpt. 1583-B. : Rev. 1958. R&R 1965.
Performance of sandwich panels in FPL experimental unit.	: Anderson, L. O., : & Wood, L. W.	: USFS Res. Paper : FPL 12. 1964.
Structural sandwich design criteria.	: Kuenzi, E. W.	: FPL Rpt. 2161. 1959. : Reprinted 1963.
Paper honeycomb cores for structural building panels:	: Seidl, R. J., : Kuenzi, E. W.,	: FPL Rpt. 1796. 1951. : R&R 1961.
Effect of resins, adhesives, fungicide, and weight of paper on strength and resistance to decay.	: Fahey, D. J., & : Moses, C. S.	: :
Wrinkling of the facings of sandwich construction subjected to edgewise compression.	: Norris, C. B., : Ericksen, W. S., : March, H. W., & : others.	: FPL Rpt. 1810. 1949. : R&R 1961. :
*Sandwich constructions.	: Heebink, B. G.	: Modern Plastics Ency. : Issue. Sept. 1956.
Structural sandwich construction.	: Forest Products : Laboratory	: Separate from Wood : Handbook. USDA Agr. : Handb. 72. 1955.

Title	Author	Publication and date
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STRUCTURAL SANDWICH CONSTRUCTIONS AND MATERIALS (continued)

*Paper honeycomb as a core for structural sandwich construction.	Kuenzi, E. W.	: ASTM Spec. Tech. Pub. 118. 1952.
*Fabrication techniques for structural sandwich constructions.	Heebink, B. G.	: ASTM Spec. Tech. Pub. 118. 1952.
Developments and trends in lightweight composite construction.	Markwardt, L. J.	: ASTM Spec. Tech. Pub. 118. 1952.
*Strength of sandwich construction.	Norris, C. B.	: ASTM Spec. Tech. Pub. 118. 1952.
*Sandwich construction in the elastic range.	March, H. W.	: ASTM Spec. Tech. Pub. 118. 1952.
*Properties of honeycomb core as affected by fiber type, fiber orientation, resin type, and amount.	Seidl, R. J., Fahey, D. J., & Voss, A. W.	: NACA Tech. Note 2564. 1951.
*Testing sandwich constructions at the Forest Products Laboratory.	Kuenzi, E. W.	: ASTM Bul. Feb. 1950.

STRUCTURAL TIMBERS

Evaluation of the factor of safety in structural timbers.	Wood, L. W., & Tasker, Marilyn	: FPL Rpt. 2068. 1957. : R&R 1965.
Structural values of old lumber	Wood, L. W.	: FPL Rpt. 2009. 1954. : R&R 1965. South. : Lbrmn., Dec. 15, 1954.
Strength of wood beams of rectangular cross section as affected by span-depth ratio.	Bechtel, S. C., & Norris, C. B.	: FPL Rpt. 1910. 1952. : R&R 1965.

Title	Author	Publication and date
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STRUCTURAL TIMBERS (continued)

Stiffness and shrinkage of green and dry joists.	: Wood, L. W., & : Soltis, L. A.	: USFS Res. Paper : FPL 15. 1964.
A study of the strength of short and intermediate wood columns by experimental and analytical methods.	: Parker, J. E.	: USFS Res. Note : FPL-028. 1964.
Stress distribution due to negative moment over block supports in a three-span continuous wood laminated beam.	: Soltis, L. A.	: USFS Res. Note : FPL-060. 1964.
Wood for use in bulk storage structures.	: Wood, L. W.	: USFS Res. Note : FPL-041. 1964.
Working stresses for farm building lumber.	: Wood, L. W.	: Agr. Engin. Jan. 1961.
Formulas for columns with side loads and eccentricity.	: Wood, L. W.	: FPL Rpt. 1782. 1950. : R&R 1961.
*The factor of safety in design of timber structures.	: Wood, L. W.	: Trans. Amer. Soc. : Civil Engin. Paper : 3051, Vol. 125. 1960.
Properties of white-pocket Douglas-fir lumber.	: Wood, L. W.	: FPL Rpt. 2017. 1955. : R&R 1960.
*Duration of load and fatigue in wood structures.	: Wood, L. W., : Horner, A. C., : Lewis, W. C., & : Ruble, E. J.	: ASCE Manual 17, or : Jour. of the Struc. : Proc. ASCE. 1957.

Title	Author	Publication and date
<u>STRUCTURAL TIMBERS (continued)</u>		
Solid and built-up structural members.	: Forest Products Laboratory	: Separate from Wood Handbook. USDA Agr. Handb. 72. 1955.
Strength studies of timber and the development of structural timber grades in the United States.	: Markwardt, L. J., & Wood, L. W.	: The Inc. Assoc. of Architects & Surveyors, London, England. Part IV, Symposium on the Testing and Stress Grading of Timber. 1953.
New method of calculating longitudinal shear in checked beams.	: Newlin, J. A., Heck, G. E., & March, H. W.	: Trans. of Amer. Soc. Mech. Engin. Oct. 1934.
*Shear in checked beams.	: Newlin, J. A.	: Amer. Ry. Engin. Assoc. Bul. 364, 1934. Wood Pres. News, April 1934.
*Wood beam design method promises economies.	: Newlin, J. A., Heck, G. E., & March, H. W.	: Engin. News-Record. May 1933.
*Tests of large timber columns and presentation of the Forest Products Laboratory column formula.	: Newlin, J. A., & Gahagan, J. M.	: USDA Tech. Bul. 167. 1930. GPO, 10 cents.
*Definition of terms relating to timber.	: ASTM	: ASTM Std. D 9.
*Methods for establishing structural grades of lumber.	: ASTM	: ASTM Std. D 245.

Title	Author	Publication and date
-------	--------	----------------------

STRUCTURAL TIMBERS (continued)

*Recommended practice for determining design stresses for load-sharing lumber members.	: ASTM	: ASTM Std. D 2018.
	:	:
	:	:
	:	:
*Standard definitions of terms relating to timber.	: ASTM	: ASTM Std. D 9.
	:	:
	:	:
*Lumber--American lumber standards for softwood lumber.	: U.S. Department of Commerce	: Simplified Practice Recommendation 16.
	:	: GPO, 15 cents.

USES

Aircraft

Effect of thickness of plywood reinforcing plates on the behavior of solid wood aircraft spars under changes in moisture content.	: Sanborn, W. A.	: FPL Rpt. 1527. 1945.
	:	: R&R 1962.
	:	:
	:	:
A comparison of shearing strengths of glued joints at various grain directions as determined by four methods of test.	: McLeod, A. M., : Yolton, L. A., : Sanborn, W. A., : & Phillips, R. S.	: FPL Rpt. 1522. 1945. : R&R 1962.
	:	:
	:	:
*Design of wood aircraft structures.	:	: ANC-18. 1951.
	:	: GPO, \$1.25.
	:	:
*Wood aircraft inspection and fabrication.	:	: ANC-19. 1951.
	:	: GPO, \$1.25.
	:	:
*Shear stress distribution along the glue line between the skin and cap-strip of an aircraft wing.	: Norris, C. B., & : Ringelstetter, L.A.	: NACA Tech. Note 2152. : 1950.
	:	:
	:	:

Title	Author	Publication and date
-------	--------	----------------------

USES (continued)

Aircraft (continued)

*Aircraft woods: Their proper ties, selection, and characteristics.	: Markwardt, L. J.	: NACA Rpt. 354. 1930.
	:	:
	:	:
*Strength and characteristics of wood used in aircraft construction.	: Trayer, G. W.	: ASTM Proc. 1930.
	:	:
	:	:

Buildings and Structures

General

Wood structure performance in an earthquake.	: Anderson, L. O., : & Liska, J. A.	: USFS Res. Paper : FPL 16. 1964.
	:	:
A review of FPL studies on stressed-skin and sandwich-panel units.	: Anderson, L. O.	: Forest Prod. Jour. : May 1964.
	:	:
	:	:
Stressed-skin panel performance after twenty-five years of service.	: Heyer, O. C., & : Blomquist, R. F.	: USFS Res. Paper : FPL 18. 1964.
	:	:
	:	:
Increases in deflection and stresses caused by ponding of water on roofs.	: Kuenzi, E. W., & : Bohannon, Billy	: Forest Prod. Jour. : Sept. 1964.
	:	:
	:	:
Study of temperature in wood parts of houses throughout the United States.	: Heyer, O. C.	: USFS Res. Note : FPL-012. 1963.
	:	:
	:	:
*Minimum property standards for multifamily housing.	: Federal Housing : Administration	: FHA No. 2600. 1963. : GPO, \$2.50.

Title	Author	Publication and date
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USES (continued)

Buildings and Structures (continued)

General (continued)

*National design specification for stress-grade lumber and its fastenings.	: National Lumber Manufacturers Assoc.	: 1963 Ed. 50 cents.
*Modern timber engineering.	: Scofield, W. F., & O'Brien, W. H. Rev. by W. A. Oliver.	: 1963. Southern Pine Assoc. \$3.
*The Unicom method of house construction--Design principles.	: National Lumber Manufacturers Assoc.	: Unicom Manual No. 1. 1962. \$10.
*The Unicom method of house construction--Fabrication of components.	: National Lumber Manufacturers Assoc.	: Unicom Manual No. 2. 1963. \$10.
*Minimum property standards for one and two living units.	: Federal Housing Administration	: FHA No. 300. 1958. GPO, \$1.75.
*Timber design and construction handbook.	: Timber Engineering Company	: 1956. F. W. Dodge Corp., New York. \$12.75.
*Wood-frame house construction.	: Anderson, L. O., & Heyer, O. C.	: USDA Agr. Handb. 73. 1955. GPO, 65 cents.
Structural performance requirements in housing codes.	: Wood, L. W.	: ASTM Spec. Tech. Pub. 166. 1954.
Manual on wood construction for prefabricated houses.	: Forest Products Laboratory	: Housing & Home Finance Agency. 1947. GPO, \$1.50.

Title	Author	Publication and date
-------	--------	----------------------

USES (continued)

Buildings and Structures (continued)

General (continued)

Selection of lumber for farm and home building.	: Sweet, C. V., & Johnson, R. P. A.	: USDA Farmers' Bul. 1756. 1936.
---	-------------------------------------	----------------------------------

Insulation, Ventilation, and Condensation

Condensation problems in modern buildings.	: Teesdale, L. V.	: FPL Rpt. 1196. Rev. 1955. R&R 1965.
Remedial measures for building condensation difficulties.	: Teesdale, L. V.	: FPL Rpt. 1710. Rev. 1955. R&R 1962.
Thermal insulation made of wood-base materials--Its application and use in houses.	: Teesdale, L. V.	: FPL Rpt. 1740. 1949. Rev. 1958.
Water-vapor permeability of matched barrier materials as yielded by two methods.	: Teesdale, L. V.	: FPL Rpt. 2131. 1958.
Thermal insulation.	: Forest Products Laboratory	: Separate from Wood Handbook. USDA Agr. Handb. 72. 1955.
*Tentative methods of testing materials for use as vapor barriers under concrete slabs and as ground cover in crawl spaces.	: ASTM	: ASTM Std. E. 154.

Materials

Overlays for lumber--an old product in a new dress.	: Fleischer, H. O., & Heebink, B. G.	: USFS Res. Note FPL-035. 1964.
---	--------------------------------------	---------------------------------

Title	Author	Publication and date
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USES (continued)

Buildings and Structures (continued)

Materials (continued)

What can be expected from treated wood in highway construction.	: Blew, J. O., Jr.	: FPL Rpt. 2235. 1961.
	:	:
	:	:
*America's wooden houses.	: Anderson, L. O.	: Indian Builder, Mar. 1962.
	:	:
*Wood floors for dwellings.	: Forest Products Laboratory	: USDA Agr. Handb. 204. 1961. GPO, 35 cents.
	:	:
Paper overlaid lumber.	: Heebink, B. G.	: Forest Prod. Jour. Apr. 1961.
	:	:
The use of wood in tomorrow's house.	: Fleischer, H. O.	: Forest Prod. Jour. Dec. 1960.
	:	:
*Selecting farm framing lumber for strength.	: Wood, L. W.	: USDA Leaflet 481. 1960. GPO, 5 cents.
	:	:
Properties of insulating fiber-board sheathing.	: Luxford, R. F.	: FPL Rpt. 2032. 1955. R&R 1960.
	:	:
Materials of construction: Wood.	: Stamm, A. J., & Baechler, R. H.	: Indus. & Engin. Chem. Sept. 1958.
	:	:
Rigidity and strength of houses built of plywood stressed-cover panels.	: Luxford, R. F., & Erickson, E.C.O.	: ASTM Spec. Tech. Bul. 210. 1957.
	:	:
*A study of farm building materials on farms in the North Central Region. I. A field survey of wood shingle roofs.	: Dale, A. C., & Schmidt, J. L.	: Purdue Univ. Exper. Sta. Bul. 601. 1954.
	:	:

Title	:	Author	:	Publication and date
	:		:	

USES (continued)

Buildings and Structures (continued)

Materials (continued)

Suitability of woods for use in barns and other farm structures.	: Forest Products Laboratory	: FPL Tech. Note 246. Reissued 1953.
	:	:
	:	:
*Wood, too, needs protection from the elements.	: Freas, A. D.	: Miss. Valley Lbrmn. Dec. 27, 1946.
	:	:
*Use and abuse of wood in house construction.	: Johnson, R. P. A., & Davis, E. M.	: USDA Misc. Pub. 358. 1939. GPO, 10 cents.

Structural Components

Light wood trusses.	: Luxford, R. F.	: FPL Rpt. 2113. 1958.
	:	: R&R 1965. Amer. Soc. Civil Engin. Proc. Paper 1839. 1958.
	:	:
Diaphragm action of diagonally sheathed wood panels.	: Doyle, D. V.	: FPL Rpt. 2082. 1957. R&R 1965.
	:	:
Observations of damage to houses by high winds, waves, and floods and some construction precautions.	: Luxford, R. F., & Smith, W. R.	: FPL Rpt. 2095. 1957. R&R 1965.
	:	:
Strength tests of spliced studs.	: Erickson, E. C. O.	: FPL Rpt. 1275. Rev. 1959. R&R 1965.
	:	:
Research in wind-resistant farm building construction.	: Doyle, D. V.	: FPL Rpt. 1930. 1952. R&R 1965.
	:	:
Prefabricated house system developed by the Forest Products Laboratory.	: Luxford, R. F.	: FPL Rpt. 1165. Rev. 1952. R&R 1965.
	:	:

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

USES (continued)

Buildings and Structures (continued)

Structural Components (continued)

A study of the strength of short and intermediate wood columns by experimental and analytical methods.	: Parker, J. E.	: USFS Res. Note : FPL-028. 1964.
A study of wind stresses in three typical pole building frames.	: Parker, J. E.	: USFS Res. Note : FPL-049. 1964.
Built-up beams for light frame and pole construction.	: Doyle, D. V.	: FPL Rpt. 2230. 1962.
*Rotational resistance of three-membered nailed joints subjected to bending moment.	: Perkins, R. H., : Suddarth, S. K., : & Dale, A. C.	: Purdue Univ. Res. Bul. : 753. 1962.
Some tests of end-matched lumber.	: Wilson, T. R. C.	: FPL Rpt. 1197. 1928. : R&R 1962.
*Determination of member stresses in wood trusses with rigid joints.	: Suddarth, S. K.	: Purdue Univ. Res. Bul. : 714. 1961.
Evaluation of the stiffness of a roof system made of glued-laminated beams and heavy timber decking.	: Werren, F.	: FPL Rpt. 2229. 1961.
*Wood floors for dwellings.	: Forest Products : Laboratory	: USDA Agr. Handb. 204. : 1961. GPO, 35 cents.
How to avoid nail popping in drywall construction.	: Luxford, R. F.	: FPL Rpt. 2036. 1955. : R&R 1960.

Title	Author	Publication and date
-------	--------	----------------------

USES (continued)

Buildings and Structures (continued)

Structural Components (continued)

Fabricated wall panels with plywood coverings.	: Luxford, R. F.	: FPL Rpt. 1099. 1936. : R&R 1960.
*Standard for heavy timber decking.	: :	: : Amer. Inst. of Timber : Construct. 1960.
Portable equipment for measuring twist in doors.	: Heebink, B. G.	: FPL Rpt. 2148. 1959.
Hollow-core flush doors.	: Forest Products : Laboratory	: FPL Rpt. 1983. Rev. : 1959.
Performance of structural pole frames under test load.	: Doyle, D. V.	: FPL Rpt. 2111. 1958.
Segmental rafters for Gothic-roofed farm buildings.	: Forest Products : Laboratory	: FPL Tech. Note 261. : 1958.
*The designing for strength of flat panels with stressed coverings.	: Newlin, J. A.	: FPL Rpt. 1220. 1939. : R&R 1957. Out of print.
*Preventing storm wind damage to farm buildings.	: Molander, E. G., : & Dodge, R. J.	: USDA Inform. Bul. 144. : 1956.
*Basement vs. no basement.	: :	: Housing & Home Finance : Agency Tech. Bul. 8. : 1949.
*Properties of experimental wood-base house flooring materials (including a tentative test procedure for flooring).	: : : :	: Housing & Home Finance : Agency Tech. Paper 11. : 1948. : :

Title	:	Author	:	Publication and date
	:		:	

USES (continued)

Buildings and Structures (continued)

Structural Components (continued)

Guides to improved frame walls for houses.	: Freas, A. D.	: Engin. News-Record
	:	: Oct. 17, 1946.
	:	:
*Structural and heat transfer properties of multiple box-girder plywood panels for walls, floors, and roofs.	: Whittemore, H. L.,	: Natl. Bur. Stds. Rpt.
	: Phelan, V. B., &	: BMS 99. 1943.
	: Dill, R. S., with	: GPO, 15 cents.
	: the collaboration	:
	: of Luxford, R. F.	:

Other

The role of inspection in wood ladder safety.	: Markwardt, L. J.	: FPL Rpt. 1994. 1954.
	:	: R&R 1962.
	:	:
Wood scaffold planks.	: Forest Products	: FPL Tech. Note 264.
	: Laboratory	: 1962.
	:	:
Studies of compression failures and their detection in ladder rails.	: Pillow, M. Y.	: FPL Rpt. 1733. 1949.
	:	: Reprinted 1962.
	:	:
*Cut out those ladder accidents.	: Freas, A. D.	: Magazine of Standards
	:	: (Amer. Stds. Assoc.)
	:	: May 1959.
	:	:
*American Standard safety code for portable wood ladders.	:	: Amer. Standards Assoc.
	:	: A14.1-1959. 1959.
	:	: \$1.80.
	:	:
Wood seats for stadiums.	: Forest Products	: FPL Rpt. 1006. Rev.
	: Laboratory	: 1958.

Title	:	Author	:	Publication and date
-----	:	-----	:	-----

USES (continued)

Other (continued)

*Wood: A manual for its use as a shipbuilding material.	: Bureau of Ships	: NAVSHIPS 250-336.
	:	:
	:	:
Vol. I. Basic wood technology applicable to boat and shipbuilding.	: 1945. Rev. 1957.	: GPO, 45 cents.
	:	:
Vol. II. Techniques and practices applicable to preservation and storage	: 1945. Rev. 1958.	: 45 cents.
	:	:
Vol. III. Technical data applicable to boat and ship design	: 1962. 60 cents.	:
	:	:
Vol. IV. Techniques applicable to boat and ship construction.	: 1962. \$1.75.	:
	:	:
	:	:
Ladders and ladder safety.	: Markwardt, L. J.	: Plant Engin. 1956.
	:	:
Facts and fancies about ladders	: Markwardt, L. J.	: National Safety News.
	: & Freas, A. D.	: Dec. 1950.
	:	:
Don't test that ladder.	: Freas, A. D.	: International Fire
	:	: Fighter, Oct. 1949;
	:	: National Safety News,
	:	: Nov. 1949.

GENERAL

Annual report of the Forest Products Laboratory	: Forest Products Laboratory	: (Current year)
	:	:
	:	:
Inside wood--a short trip into the interior for the layman.	: Champion, F. J.	: USFS Res. Note
	:	: FPL-014. 1963.
	:	:
Changing utilization of hardwoods.	: Locke, E. G.	: FPL Rpt. 2244. 1962.
	:	:

Title	Author	Publication and date
<u>GENERAL</u> (continued)		
Study and investigation of use of materials and new design and methods in public works:		: 87th Congress, 2nd Session. Com. Print No. 2. 1962.
The role of wood and wood products in public works.		
Research--A basis for structural engineering with wood.	: Liska, J. A.	: Forest Prod. Jour. Aug. 1962.
The Forest Products Laboratory--A brief account of its work and aims.	: Forest Products Laboratory	: Agr. Inform. Bul. 105. Rev. 1962.
Some books about wood (a list).		: FPL Rpt. 399. Rev. 1961.
*Products of American forests.	: Champion, F. J.	: USDA Misc. Pub. 861. 1961. GPO, 30 cents.
*Fifty years of service through wood research.	: Forest Products Laboratory	: USDA Misc. Pub. 820. 1960. Out of print.
*How standards serve the wood industries.	: Markwardt, L. J.	: Magazine of Standards. Amer. Standards Assoc. June 1959.
*Wood: Colors and kinds.	: Forest Products Laboratory	: USDA Agr. Handb. 101. 1956. GPO, 50 cents.
*Wood handbook.	: Forest Products Laboratory	: USDA Agr. Handb. 72. 1955. GPO, \$2.25.
Definitions pertaining to wood and other forest products (see Glossary, Wood Handbook).		: Separate from Wood Handbook. USDA Agr. Handb. 72. 1955.

Title	Author	Publication and date
-------	--------	----------------------

GENERAL (continued)

Wood--A simple explanation, what it is and how we use it.	: Champion, F. J.	: FPL Rpt. 1972. 1954.
	:	: R&R 1960.
	:	:
*Research in forest products aids standardization.	: Markwardt, L. J.	: Standards World.
	:	: Apr. 1950.
	:	:
*Wood as an engineering material.	: Markwardt, L. J.	: ASTM Proc. 1943.
	:	:

PUBLICATION LISTS ISSUED BY THE

FOREST PRODUCTS LABORATORY

The following lists of publications deal with investigative projects of the Forest Products Laboratory or relate to special interest groups and are available upon request:

Architects, Builders, Engineers,
and Retail Lumbermen

Growth, Structure, and
Identification of Wood

Box, Crate, and Packaging Data

Logging, Milling, and Utilization
of Timber Products

Chemistry of Wood

Mechanical Properties of Timber

Drying of Wood

Structural Sandwich, Plastic
Laminates, and Wood-Base
Components

Fire Protection

Fungus and Insect Defects in
Forest Products

Thermal Properties of Wood

Furniture Manufacturers,
Woodworkers, and Teachers
of Woodshop Practice

Wood Fiber Products

Wood Finishing Subjects

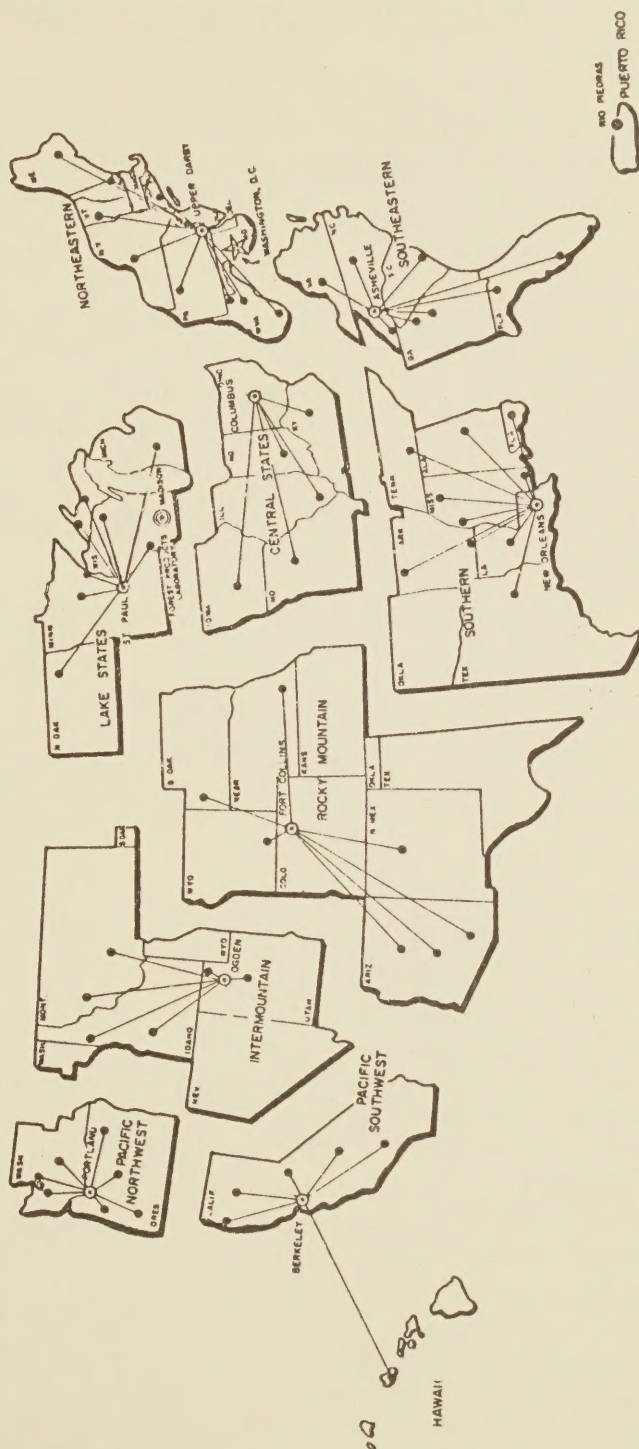
Glue and Plywood

Wood Preservation

Note: Since Forest Products Laboratory publications are so varied in subject matter, no single catalog of titles is issued. Instead, a listing is made for each area of Laboratory research. Twice a year, December 31 and June 30, a list is compiled showing new reports for the previous 6 months. This is the only item sent regularly to the Laboratory's mailing roster, and it serves to keep current the various subject matter listings. Names may be added to the mailing roster upon request.

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